U.S. Environmental Protection Agency
OPA90 Removal Project Plan

I. HEADING

Date: August 29, 2012

From: Thomas Condon, On-Scene Coordinator
U.S. EPA, Region 1

To: LCDR Freddie Thompson, U.S. Coast Guard
National Pollution Funds Center

Subject: Oil Removal Project Plan
Lonsdale Bleachery Site
Lincoln, Rhode Island

II. BACKGROUND

FPN:	E04116
EPA Site ID:	Z1AK
Response Authority:	OPA
State Notification:	Rhode Island Dept. of Environmental Management
State OSLTF Opened:	August 2, 2004
Mobilization Date:	TBD
Current Project Ceiling:	$ 1,900,000
Proposed Project Ceiling:	$ 2,750,000
Demobilization Date:	TBD
Completion Date:	TBD
Incident Category:	Activities at this site are pursuant to Section 311(c) Federal Water Pollution Control Act (FWPCA), as amended by the Oil Pollution Act of 1990 (OPA), Public Law 101-380, in accordance with the National Contingency Plan (NCP).

III. SITE INFORMATION and CONDITIONS

A. Site Description and Physical Location

The Lonsdale Bleachery Site ("Site") is the location of a former textile mill abutting the Blackstone River in Lincoln, Rhode Island. On July 30, 2004, an emergency response was conducted by Rhode Island Department of Environmental Management ("RIDEM") in response to a petroleum odor and sheen that were observed downstream on the Blackstone River. The former Lonsdale Bleachery was investigated as the possible

source of the sheen. RIDEM discovered oil seeping into the river from the site. At the request of RIDEM, EPA mobilized to the scene of the oil spill on August 5, 2004 to respond to the release.

The Site is located off of Carrington Street in the Lonsdale district of Lincoln, Providence County, Rhode Island. The geographic coordinates for the Site are 41.9111° north latitude and 71.4067° west longitude. The Site abuts the Blackstone River, a National Heritage River, which flows into Narragansett Bay. Once a thriving 19th century textile and bleachery mill complex, the area was subdivided into 29 different parcels after the mill closed down approximately 50 years ago, and is now comprised of several small industrial, commercial, and retail buildings. In the center of the complex, the largest mill building stands vacant.

The oil seeps into the river, particularly during periods of low water levels, from the base of a granite block retaining wall in the former fuel storage area of the mill. In this area, heating oil was formerly stored in three large underground concrete bunkers adjacent to the river. According to EPA's title search, this vacant portion of the Site (Parcel 96) is owned by the Town of Lincoln. EPA issued a NOFI to the Town on September 28, 2004. In its written response dated October 18, 2004, the Town disputed that it owns this vacant parcel, claiming that it only holds tax title interest in the property.

B. Description of Threat

Due to the location and nature of the contamination described herein, this ongoing release poses an imminent threat of continued discharge of oil into navigable waterways of the United States. Oil globules can be observed seeping out from the base of the granite retaining wall (particularly during periods of low water) and creating a sheen on the Blackstone River.

The primary sources of this oil included the three concrete oil storage bunkers and associated underground piping adjacent to the River. These primary sources of the oil have been identified and removed as a result of EPA's OPA 90 response activities to date. However, historic oil releases from these source areas have saturated underlying soils with oil and created a pool of floating product on the water table, which continues to migrate into the river. As such, this oil represents a significant threat to this navigable waterway.

C. Previous Site Actions

In 1982, RIDEM responded to a similar release of oil to the Blackstone River from the Site. Under RIDEM oversight, the previous owner of Parcel 96 excavated some oil-contaminated soils from a small area upriver of the bunkers and installed and intermittently operated a french drain/recovery well system during the 1980s. While this

cleanup may have appeared sufficient at that time, the current release and the recent discovery of the oil bunkers indicate otherwise.

IV. RESPONSE INFORMATION

A. Current Situation

EPA has installed soil borings, monitoring wells, and conducted sampling activities as part of a removal program preliminary assessment/site investigation (PA/SI) at the Site. Analytical services were provided by EPA's New England Regional Laboratory in Chelmsford, Massachusetts. Samples of oil and oil-contaminated soils were analyzed for volatile organics, PCBs, and oil "fingerprint" identification. Based on EPA's sampling results, the oil appears to be a weathered Bunker C oil. No heavy chlorinated solvents, polychlorinated biphenyls (PCBs), or CERCLA hazardous substances have been detected.

EPA is currently implementing an OPA 90 Project Plan for assessment and cleanup activities needed to address the sources of this oil release, the oil-saturated underlying soils, and the pool of floating product. EPA mobilized its Emergency Rapid Response Services (ERRS) contractor to the Site on August 10, 2005 to begin cleanup activities. EPA and the ERRS contractor cleared vegetation, debris, and rubble from the Site to allow safe access. A deteriorated smokestack on an adjacent property, which posed a safety hazard to Site workers, was removed by its owner at no cost to the government.

Beneath the ruins of the former coal shed structure, three underground, concrete fuel oil storage bunkers and associated piping were uncovered and cleaned out. The bunkers were the demolished to permit access to the underlying oil-saturated soils and floating product. Approximately 5000-10,000 tons of these oil-saturated soils are estimated to be present, extending as much 10 feet below the former bunkers (20 feet below original grade). Due to these site conditions and the immediate proximity of both the river and an elevated canal/raceway, approximately 500 linear feet of sheet piling was installed during the fall of 2006 to allow for safe excavation activities. EPA and the ERRS contractor are currently excavating the oil-saturated soils and shipping them off-site for disposal via asphalt batching. Within the sheet-piled excavation area, the water table is being depressed with a dewatering system to permit the safe excavation of the oil-saturated soils. Free oil is being collected from the water surface with a drum skimmer, and oily water is being treated in an on-site water treatment system.

Approximately 3,250 tons of oil-contaminated soils and approximately 1,280,000 gallons of oil and oily water have been removed from the Site during the course of these cleanup activities. The contaminated soils are being shipped off-site for disposal via asphalt batching. One roll-off container full of oil-contaminated piping and other debris from the bunkers was shipped off-site for disposal. Of the 1,280,000 gallons of oil and oily water

recovered, approximately 10,000 gallons of pure oil and the most heavily contaminated oily water were collected with a vac truck and shipped off-site for treatment/recycling. The remaining 1,270,000 gallons of oily water was treated with a mobile treatment system and then discharged on-site.

Pursuant to a Pollution Removal Funding Authorization (PRFA), RIDEM and its contractor continue to maintain containment boom and sorbents in the river to prevent the oil from migrating downriver.

B. Proposed Actions

The work to be performed will include the following components:

1) Mobilize appropriate personnel, equipment, expendables, and supplies as needed.
2) Continue to deploy boom and sorbents as needed to prevent the downstream migration of oil seeping into the Blackstone River.
3) Continue to remove free product and excavate oil-saturated soils that pose a threat of oil release to the river.
4) Backfill with clean fill as needed to secure excavations.
5) Clear and grub vegetation, rubble, and debris as needed to support above activities.
6) Manage and dispose of oil-contaminated waste streams generated by above activities, including dewatering and on-site water treatment as needed.
7) Provide site security as needed.

C. Next Steps / Key Issues

EPA's legal counsel and enforcement staff will continue to coordinate with the USCG with regard to the ownership of Parcel 96.

V. ESTIMATED PROJECT COST INFORMATION (FPN E04116)

A. Estimated Project Costs Incurred to Date

1. Extramural Costs:

ERRS Contractor:	$	1,732,142.00
START Contractor:	$	7,431.00
RIDEM	$	134,063.04

2. Intramural Costs:

U.S. EPA Personnel	$	56,299.00
U.S. EPA Travel	$	- 0 -
U.S.C.G. Strike Team	$	- 0 -
TOTAL =	**$**	**1,929,935.04**

B. Total Project Estimated Costs

1. Extramural Costs:

ERRS Contractor:	$	2,420,000.00
START Contractor:	$	40,000.00
RIDEM	$	160,000.00

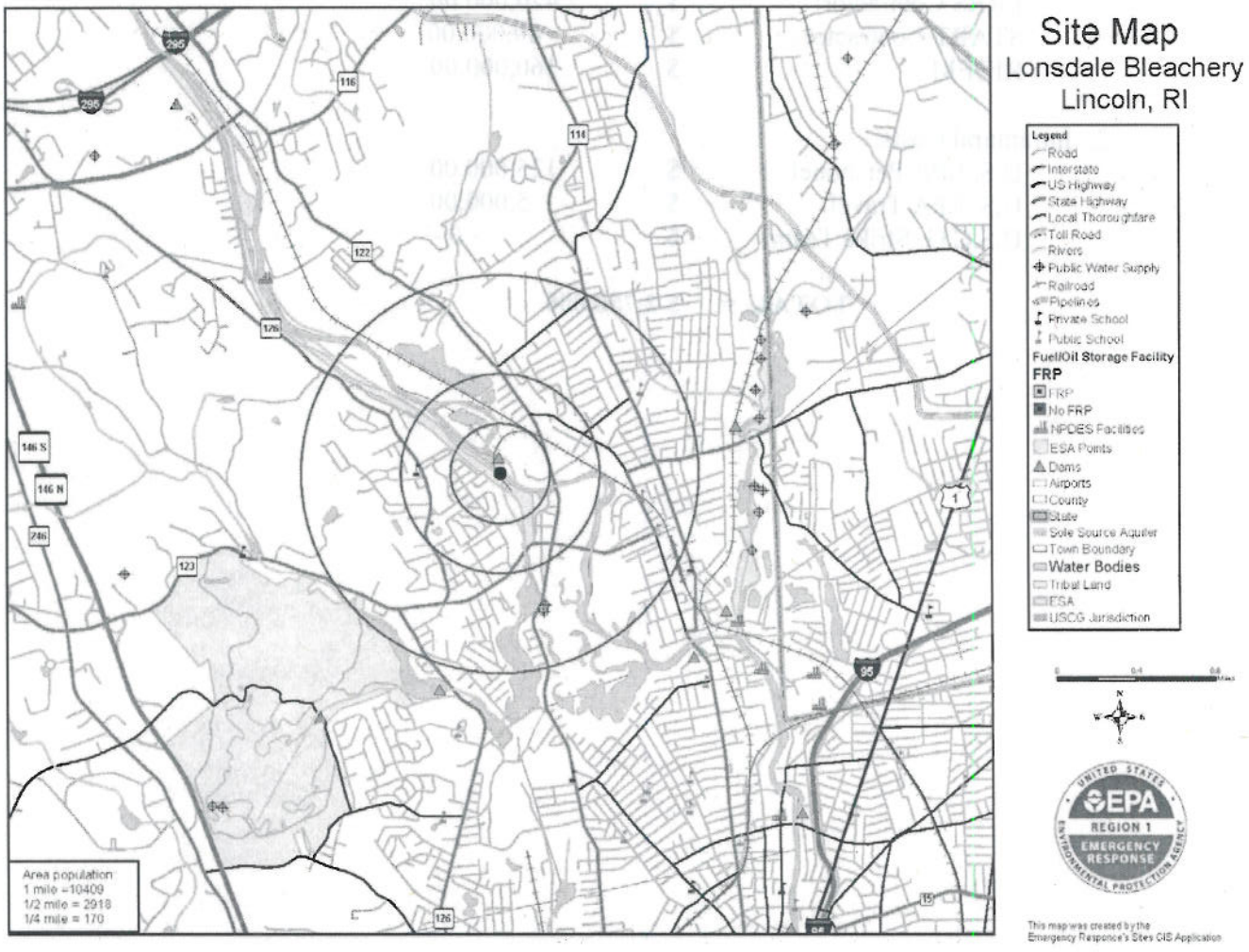
2. Intramural Costs:

U.S. EPA Personnel	$	125,000.00
U.S. EPA Travel	$	5,000.00
U.S.C.G. Strike Team	$	- 0 -

TOTAL = $ 2,750,000

Attachment 1

Site Location Map



SCENE: Sheen on Blackstone River emanating from Site. Photograph taken facing northeast.
DATE: August 5, 2004 **TIME:** 0842 hours
PHOTOGRAPHER: Frank Gardner **CAMERA:** Canon PowerShot A40

SCENE: View of Site prior to cleanup activities. Photograph taken facing west. Concrete structure on the left is the remnants of the former "coal shed". The oil storage bunkers were later encountered below grade, beneath the coal shed.
DATE: April 25, 2005 **TIME:** 0906 hours

PHOTOGRAPHER: Frank Gardner **CAMERA:** Canon PowerShot A40

SCENE: View of excavation of oil-contaminated soils from former oil storage bunker area. Photograph taken facing northeast. Note proximity of Blackstone River in background.
DATE: September 6, 2005 **TIME:** 0905 hours
PHOTOGRAPHER: Frank Gardner **CAMERA:** Canon PowerShot A40

SCENE: View of excavation of oil-contaminated soils and debris from former oil storage bunker area. Photograph taken facing east.
DATE: October 6, 2005 **TIME:** 0948 hours

PHOTOGRAPHER: Frank Gardner **CAMERA:** Canon PowerShot A40

SCENE: View of excavation between bunker and Blackstone River, showing oil contamination beneath and next to the bunker. Photograph taken facing southwest.
DATE: October 6, 2005 **TIME:** 1139 hours
PHOTOGRAPHER: Frank Gardner **CAMERA:** Canon PowerShot A40

SCENE: Panorama of Site after bunkers were cleaned out. Photograph taken facing northeast.
DATE: November 3, 2005 **TIME:** 1115 hours
PHOTOGRAPHER: Frank Gardner **CAMERA:** Canon PowerShot A40

SCENE: View of bunker demolition activities. Note heavy amount of oil encountered beneath floor of bunker. Photograph taken facing northeast.
DATE: June 22, 2006
TIME: 1017 hours
PHOTOGRAPHER: Frank Gardner
CAMERA: Canon PowerShot A40

SCENE: Aerial photo of site and surrounding area. Note river to north and east of site and canal/raceway to the south and west.
DATE: April 26, 2002
SOURCE: GIS stock photo

SCENE: View of sheet piling installation activities. Photograph taken facing west.
DATE: October 24, 2006 **TIME:** 1148 hours
PHOTOGRAPHER: Frank Gardner **CAMERA:** Canon PowerShot A40

SCENE: Excavation of oil-saturated soils. Photograph taken facing north.
DATE: November 3, 2006 **TIME:** 1140 hours
PHOTOGRAPHER: Frank Gardner **CAMERA:** Canon PowerShot A40